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ABSTRACT

This paper focuses on: (1) prevalent assumptions and weaknesses underlying research on preschool programs for 3- to 5-year-olds; (2) issues concerning transition to kindergarten and early elementary grades; (3) the preparation of early childhood personnel; and (4) critical research needs. The review of research findings prompts questions about the advisability of: (1) initiating center- or classroom-based programs for all children regardless of their developmental level or socioeconomic status; (2) the trend toward increased emphasis on academic achievement in the early childhood curriculum in public and private preschools and in early intervention programs for low-income and developmentally delayed children; and (3) leaving unchecked the global enthusiasm for early childhood education as a way of "saving" today's children. The discussion of transition to kindergarten views kindergarten (and perhaps the first three grades) as a developmental transition in the educational process rather than as a discrete curriculum entity. Implications of this view are pointed out. The discussion of the preparation of personnel argues for a systematic plan of personnel development that includes five tiers of activity ranging from in-service training to senior leadership preparation. Four main themes for future research are pointed out. Four figures illustrate, respectively, the delivery modes of the Head Start program, and the parent and child effects of the Center-Based, Home-Based, and Home/School programs. Seventy-eight references are included. (RH)

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Critical Policy and Research Issues for Early Childhood and Elementary Education *[1]

Donald L. Peters, Ph.D.

Introduction

Advocates for early childhood programs have been remarkably successful in recent years. Evidence of their success may be seen on many fronts: the sustained and gradually increasing support for Head Start; the expansion of educational programs and services for young handicapped children and their families; the growing support of business and industry, as well as state and local governments, for day care programs; and the general acceptance of early childhood programs by the public and elected officials. Some of this growth of support is attributable to the persuasiveness of the research that has been generated over the past twenty years. This research continues to substantiate the potential short- and long-term effects of regular participation in early childhood intervention programs for low-income, and to some degree for handicapped children, on some measures of cognitive and social development (McKey, Condelli, Ganson, Barrett, McConkey, & Plantz, 1985; Shonkoff & Hauser-Cram, 1987). Longitudinal analysis similarly indicate important intermediate and long-term effects of Head Start and similar early childhood intervention programs (Clement, Schweinhart, Barnett, Epstein, & Weikart, 1984; Lazar, Darlington, Murray, and Snipper, 1982). In the latter case, it appears that early intervention has a strong and continuing effect on children's ability to cope with the basic demands of schooling right through

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the completion of high school. These findings have been so widely disseminated that information regarding the cost-benefits of preschool in preventing delinquency and dropouts is now part of virtually every policy-maker's knowledge base.

Stimulated by these findings and by the general ground swell of enthusiasm for early childhood education, educational policy makers have moved quickly in recent years to expand early childhood services. For example, there has been a movement to lengthen the kindergarten day; New York City has developed full-day kindergarten programs and many others cities and states are now debating the initiation of similar programs (Day, 1988; Fromberg, 1987; Kagan, 1987). A second movement is to fund pre-kindergarten programs within the public schools. In just the last few years the number of states that have funded such programs has increased from 15 to 28. The Texas program serves 48,000 children and California approximately 20,000 children (Day, 1988). Indeed, just keeping up with the changing numbers of such programs and the number of children involved can be difficult (Mitchell & Modiglianni, 1989). Thirdly, virtually every state is engaged in a planning process to provide services for developmentally delayed and at-risk children as a result of P.L. 99-457. Finally, though more in response to demographic changes in society than to the findings of research, organized, formal day care programs for children, associated with the public school, are increasing at a phenomenal rate.

However, despite this rapid growth, we have remarkably little knowledge about how the reported effects of early intervention have been attained. We do know that the relationship between early childhood program participation and long-term developmental outcomes is not a simple one (Lazar et al., 1982; Woodhead, 1985; Peters, Bollin, Murphy, & Berg, 1988). It is generally agreed that the short-term effects of participation are mediated within a context of other variables in the home and school social environment both during the period of intervention and throughout the later stages of education. The power of early intervention is generally hypothesized to be dependent upon some combination of variables that define a) the child's susceptibility to environmental input; b) quantitative and qualitative variability of the intervention offered; and c) the breadth of the effort expended to alter the family context of the child's development (McDonald, 1986; Clement et al., 1984: Woodhead, 1985).

However, the lack of specificity of our understanding leaves many questions that parents and policy-makers ask essentially unanswerable on the basis of data. What little data we do have suggests we had better be very careful about making generalizations.

In this paper I shall first focus upon some of the prevalent assumptions and weaknesses underlying our research on preschool programs for 3- to 5-year-olds. Secondly, I will focus on the issues of transition to the kindergarten and early elementary grades. Finally, I will address a central issue relevant

to all early childhood programs for children zero to eight years of age - early childhood personnel preparation. Finally, I will summarize what I consider to be the critical research issues to be addressed in the near future.

Preschool Programs

Public acceptance of the research findings in early childhood education has frequently led to a loss of the qualifications and subtleties required in the appropriate interpretations of the results and, it is the over-simplifications that seem to be driving policy initiatives. Typically, these oversimplifications include the following:

1) All early childhood programs are equally beneficial.
2) The beneficial effects of early childhood programs on children's development are traceable to a single, simple cause: The child's in-class experiences.
3) What is beneficial to some kinds of children will be beneficial to all kinds of children.
4) If some intervention, schooling or parent involvement is beneficial, then more is assumed to be more beneficial.

Clearly, the early childhood research community does not readily accept these interpretations - such conclusions are both too simple and too bold. Yet researchers have seldom conducted research that provides direct and unambiguous tests of these hypotheses.

Qualitative and Quantitative Program Differences

Insufficient attention has been given to qualitative and quantitative program differences in the early childhood literature as they relate to child outcomes. Much of the early research focusing on the impact or outcomes of participation in such programs as Head Start did not investigate or analyze the critical features of program success with any clarity.

Early research which investigated variations in the curriculum employed did not prove particularly productive in generating findings of differential child outcomes that endured, although some of the recent follow-up studies of this research have proved intriguing (Schweinhart, Weikart, & Larner, 1986). However, even in the few studies of this early era of research which were designed well enough to minimize the confounding of specific teacher variables with program variables (e.g., Miller & Dyer, 1975; Stallings, 1975), a number of non-curriculum related implementation differences remained. These included such things as the amount of actual class-time received by children, the amount of inservice training and consultation received by teachers, the adequacy of the physical facilities, equipment and materials and the like. Because of these confoundings only generalized conclusions about "successful" programs could be made. Successful programs were found to have common features: careful planning and implementation, a high ratio of staff to children, a cognitively focused program with a clear framework of educational methods and goals, and at least moderate levels of parental involvement (Bronfenbrenner, 1974; Woodhead, 1985).

A recent meta-analysis of thirty-one studies involving early intervention with infants with developmental disabilities reached essentially the same conclusion (Shonkoff & Hauser-Cram, 1987).

More recently, second wave research in the day care field has focused attention on such variables as group size, child-staff ratio, and teacher education and experience (Belsky, 1984). Within the day care setting these variables have been found to be relatively reliable predictors of important child outcomes and they frequently are used as surrogate variables for more direct indices of program quality (Ruopp, Travels, Glantz, & Coelen, 1979). Indeed, it is concern with day care that has produced most of the recent research on program quality indicators (e.g., Harms & Clifford, 1980), and accreditation decisions (Bradekamp & Apple, 1986; Bradekamp, 1986; in press). These efforts have greatly expanded the number of indicators of quality being researched and have generated new efforts to develop measures of the qualitative differences between early childhood programs (c.f., Hyson & Rescorla, 1989). However, research relating these indices to child and family outcomes is just beginning. Further, the dimensions found to differentiate programs are themselves highly related. As such, this research has not a) isolated the independent effects of specific aspects of program to outcome; b) determined the most appropriate functional level for each program aspect; and c) separated out those variables that are truly important from those that are only "window dressing." This point becomes clearer when looking at the other dimensions of the intensity of intervention issue.

Classroom vs. Parent Time

The literature suggests that there are important trade-offs made in designing different delivery modes for early intervention services, e.g., those made between child in-class time and time spent with parents or the parent/child dyad (Hubbell, 1983). Within-class time has an apparent effect. Several studies indicate that full-day programs have greater immediate effects than half-day programs (within Head Start) and that full-year programs are more effective than summer-only programs. Further, evidence indicates that the number of days that each child is in attendance in Head Start is associated with achievement on the language, math, nature and science, and perceptual scales of the Head Start Measures Battery (Bergan, 1984).

On the other hand, numerous studies indicate the association between parent participation and short-term and long-term achievement of their children (McKey et al., 1985). National evaluations of Home Start indicate that Home Start children, when compared to a no treatment control, scored significantly higher on school readiness and task orientation, but there were no differences between the Home Start children and those attending more traditional, center-based Head Start programs.

Such "broad-cut" evaluations appear to suggest that Center-based or Home Based programs are equally good interventions - though their focus and intensity is quite different. Essentially, it would appear that parent activity in the home generated by the Home-Based program, compensates for the

reduced time that children spend in a classroom with a teacher. This suggests a complimentarity between child in-class time and parent in-home teaching time, with decreases in one being compensated for by increases in the other. However, recent research does not support this linear additive model.

The meta-analysis of Shonkoff and Hauser-Cram (1987), for example, found that service intensity - the planned number of weeks of intervention (typically 12 to 18 months) bore no significant relationship to child outcomes within handicapped population studied. However, the extensiveness of parent involvement did have a significant relationship. Further, program models that targeted these efforts on parents and infants together, linking the parents' role to the services given to the child, were significantly more successful than program models that worked with either the parent or the child in isolation. The authors note that in most cases it was impossible to assess if there were critical quantitative levels required for effectiveness.

Another study more directly addressed this issue. Following the model portrayed in Figure 1, Peters et al. (1988), were able to assess quantitatively the learning opportunities presented to parents, to children, and to parents and children together presented by three different program models of Head Start: Center-based, Home-based, and a mixed model that blended the two (Home/School). The quantitative differences in sources were then assessed for their direct contribution to child competence measures and their indirect contributions through parental and home changes.

Very briefly, this study sought to determine the differential effects on 174 rural, low-income children and parents to three different modes of Head Start Programming: Traditional Center-based, Home-based, and the Home/School model. More importantly, the study sought to explore the pattern of effects both within and across modes in order to ascertain how the process works.

The analyses of the data for this study were complex and can only be alluded to here. At the first level of analysis, multivariate and univariate techniques revealed no significant differences between groups across the two-year period on any measures of child competence. That is, children in each of the three program types made significant gains, but there were no differences among the three programs. However, significant differences were found in the parent and home variables measured. The Home-based program produced significant changes in the quantity of stimulation found in the home and in the amount of maternal encouragement for learning. To determine the relationship of intervention and parent variables on child competence, three equations were tested separately within each delivery mode:

1) Learning Opportunities + Child Pretest Scores + Parent Pretest Scores + Parent Posttest Scores = Child outcomes.
2) Learning Opportunities + Child Pretest Scores + Parent Pretest Scores = Parent Posttest Scores.
3) Learning Opportunities + Child Pretest Scores + Parent Pretest Scores + Child Posttest Scores = Parent Posttest Scores.

The theoretically and practically interesting variables within each equation have been emphasized. As was expected the pre-intervention variables, Child Pretest and Parent Pretest were the strongest and most consistent predictors of both child and parent posttest scores. Omitting these variables from our discussion the results, pictured in Figure 2, are summarized in Table 1.

These findings suggest the following scenarios:

For Center-Based programming it appears that the school-like arrangements, teacher expertise, and minimal engagement of parents promotes parental disassociation from the learning process of the children. For the majority of the children the effects of programming may be direct. However, the variability in the measures of Learning Opportunities is contributed by a relatively few children. Hence, in the regression analyses, these children contributed disproportionately to the results. It appears that, based upon perceived problems of the child or the family, a decision was made that greater intervention efforts were needed. As a result, staff:

a) increased communication with the parents;

b) increased the number and duration of home visits; and

c) encouraged parents to volunteer in the program.

This, in turn, resulted in improved child performance and Maternal Language which, again, resulted in increased Expectations. This scenario was confirmed by reports of the teachers and home visitors involved.

Hence, as may be seen in Figure 2, parent and child effects of Child In-Class Time are primarily negative whereas parent activation variables have a positive effect on child variables which, in turn, have an effect on Maternal Language and Expectations.

Within the Home-based program the child was an indirect target of intervention. Program variables had no direct affect on child outcomes. Child In-Class Hours, Home Visits Hours, and Parent Volunteer Time served to:

a) improve the Home Environment;

b) increase Maternal Encouragement for exploration and learning; and

c) increase parent teaching hours.

These, in turn, improved children's performance on a range of measures. The child changes, either in parallel or in sequence, further increased Maternal Expectations and Encouragement and brought about a child rearing style that was more exacting and directive (less warm and open).

The changed parental behaviors then fed back and produced additional child changes and the whole pattern recycled. This is indicated by the reciprocal arrows in Figure 3.

The mixed model, as might be expected, produced mixed results. The direct child effects of In-Class Time were strong, and indirect effects through Maternal Encouragement and Expectations were noted. Child behavior change did not seem, however, to produce the continuing recycling of the Home-based program.

Unfortunately, the sample sizes of this study provided little more than the opportunity to explore and speculate as to the meanings of the different processes involved in these three program models. It does seem, however, that the critical dimension was the engagement of the family in the process. On follow-up in kindergarten and first grade, fewer of the Home-based children were retained or had special placements. This suggests that whatever residual effects there were, resulted from the initiation of a cyclical pattern of child performance and parental encouragement and expectations for some of the children accompanied by a child rearing style that was less warm and more directing. Such findings are consistent with expectations from the literature on achievement motivation and achievement press.

This study does make it clear that the complementarity between child in-class time and parent involvement is not linear. The total hours of instruction directed at children (In-Class hours + Home visit hours + Parent Instruction hours) differed markedly across program models (Center-based = 819; Home/School = 619; Home-based = 221). In terms of efficiency, it appears that efficiency goes down with an increase in center-based programming, at least within this study and with the Head Start sample.

Child Characteristics/Family Characteristics

The research such as that cited above on Head Start and on programs for children with developmental disabilities fall under the general rubric of early experience research. It has been directed toward analysis of the "risks" to child development (usually cognitive development) found in some

low-income families as a result of insufficient or improper environmental stimulation (Cocking, 1986). Based upon this "deficit" model, program planners have sought the means through which the range of stimulation and support within the home and family for child achievement may be increased (Peters, 1989). Most often, this research has directed attention toward such variables as parental expectations for achievement, parental encouragement, and direct parent teaching strategies (Elardo, Bradley, & Caldwell, 1975; Hess, Holloway, Dickson, & Price, 1984; Henderson, 1981; Trudewind, 1982). Together, these variables are thought to create a "press" for achievement within children. Such achievement press is particularly low in those families that have a long history of operating at or below the poverty level (Belle, 1983) and it has been long accepted that the "powerlessness" felt within such families has depressed both achievement expectations for children and the effort parents put forth to encourage child learning (Kamii & Radin, 1967; Hess, 1968). Thus, since their origins in the 1960's, the thrust of many early childhood intervention programs, including Head Start, has been to bring about changes in parents and the home environment.

There is a second, and more recent, line of research focusing on similar variables, but with a quite different subject population. This research, initiated in response to what has been called the "hurried child," is directed at assessing the potentially negative impact of an over emphasis on academic achievement at too early an age within middle- and upper-income families. This research has created an active debate.

This debate is found in popularly oriented books (e.g., Elkind, 1981, 1987; Postman, 1982; Doman, 1984; Englemann & Englemann, 1986) as well as in more scholarly literature. The growing literature on parental beliefs and expectations (Goodnow, 1984, 1988; Miller, 1988; Sigel, 1985, 1986) has attempted to describe the origins and content of parents' beliefs and to link variations in those beliefs to parental instructional strategies. Additionally, recent work on emotional development in children and emotion-cognition relationships (Izard, 1977; Hyson & Cone, In press), has drawn attention to the affective context within which beliefs are constructed and acted upon. This literature suggests that it is some combination or interaction of beliefs, behavior, and emotional context that determines the potential outcomes for children.

From this brief review it is clear that the first line of research assumes that more stimulation, high expectations, and more parental press for achievement is better. The second line of research questions this assumption. More likely than either, is that there is an interaction effect with initial child and family characteristics.

For example, for children who are in most need and who have the greatest potential for development, the "press" is constructive in producing positive child change, which then may trigger a reciprocal cycle of parent change, etc. The self-reinforcing cycle that is created may produce an enduring process that leads to the long-term efficacy of some programs. At the other end of

the spectrum, where children may already be achieving at or near their developmental capacity, the same or even greater "press" may produce negative outcomes (feelings of anxiety, less acceptance by parents, and less positive attitudes for school) that have the potential for initiating a negative cycle of school achievement (under-achievement?) (Hyson et al., 1988).

Similarly, there may be trade-offs involving parental involvement and engagement. In the traditional, Center-based Head Start classrooms studied by Peters (1988), there appeared to be a trade-off of immediate child cognitive gains for parental engagement in the learning process. Parents in Center-based programs appeared to be less involved in their child's learning over time, perhaps indicating an abrogation of responsibility in favor of the child's "real teacher." In contrast, within the Home-based program, the benefits to the child were mediated through changes in parents' interactive styles and were noted after a time delay. However, it is less clear whether there were affective outcomes for the child, positive or negative, since these were not measured.

Some negative outcomes were evident in the Hyson study. In that affluent, well educated sample, high expectations were associated with children who were more anxious, less confident, and who had less positive attitudes toward school.

Finally, it should be noted that, although it was not elaborated here, both studies suggested some "timing," "sequencing," and "situational context" issues. That is, the effects of some parental behaviors or child/parent interactions, or programmed interventions may have differential effects depending on when (developmentally and temporally) they occur and under what circumstances. The bottom line from this and other research is that there are few if any simple generalizations possible (Miller & Dyer, 1975; Peters, 1977).

Implications

If these preliminary but highly suggestive findings are correct, and they do seem to be consistent with previous research, they have major policy ramifications. Remembering that these studies dealt only with part-day programs, one can raise serious questions concerning:

1) The advisability of initiating center- or classroom-based programs in "Blanket-Fashion" for all children no matter what their developmental level or socio-economic status. For many children home-based programming and intensive contact with parents may be more beneficial in the long term than would center-based, public school, pre-kindergarten programs, or full-day kindergartens. Center-based programming may actually encourage low income parents to disengage from the educational process and cut-off the development of the positive reciprocal process that seems to have the most potential for long-term effects;

2) The advisability of the current trend toward increased "academic press" in the early childhood curriculum within both public and private preschools as well as in early intervention programs for low-income and developmentally delayed children. This emphasis may lead to unhealthy outcomes for some children;

3) The advisability of leaving unchecked the global and undifferentiated enthusiasm of the general public, policy makers, and others for early childhood education as a way of "saving" today's children. Such enthusiasm appears to be based upon an unwarranted set of assumptions of generalizability and may come home to roost much as "false advertising claims" often do.

Clearly, we need more, and more, sophisticated research to assist us in informing policy makers as to how best to formulate an overall plan for early education. We are currently operating from bits and pieces of information, sewn together into a crazy quilt of recommendations. We have no single study that looks at the effects, either in the short term or longitudinally, at different modes of early education and parent involvement across a broad spectrum of socioeconomic groups. We have no study that incorporates a wide array of parent and child measures to establish the range of potential interactions and the probable causal sequence from which the effects of early education derive. At the very least, there is a need to use a common set of understandings and measures as we proceed with our research efforts.

Kindergarten Education *[2]

Nationally, today, about 95% of all five-year-olds are enrolled in kindergarten programs (SAVA, 1987), making universal education for this age group, for all practical purposes, a reality. The shear fact of the numbers of children engaged in some form of kindergarten education indicates the accessibility of the services.

Far less clear is the appropriateness of the offerings. There is, nationally, continuing disagreement about the purposes of kindergarten education. The two points of view may be summarized in the statements:

a) Kindergarten's primary focus should be academic achievement and preparation for first grade.

b) Kindergarten, as a first step in schooling, should establish the ground work for later learning by providing knowledge, skills, dispositions, and feelings that will enhance later learning.

The first statement views kindergarten as a discrete curriculum entity - one of the many "grades" of the educational ladder. The second statement takes the position that kindergarten is a developmental transition, bridging between the family and other formal or informal child care and learning

*[2] My focus is on kindergarten, but most, if not all, of what is said here could be applied to grades 1 - 3, as well.

opportunities on the one hand, and formal academic schooling on the other. The latter position is the one most consistently advocated by the early childhood professional community (Bradekamp, 1987).

Barbara Day (1988) has summarized this position. She says:

"Appropriate curriculums stimulate learning in all developmental areas: physical, social, emotional, and cognitive. Inappropriate curriculums narrowly focus on cognitive development without recognizing and supporting the interactive relationship among all areas of development.'

'Appropriate curriculums respond to individual differences in ability, interest, developmental (rate) and learning styles. Inappropriate curriculums expect all children to achieve the same narrowly defined skills within the same time frame.'

'Appropriate programs offer children the choice of many learning activities. Children learn through active exploration and interactions with adults and other children; they are provided with concrete learning activities that are relevant to their own life experiences; they work individually or in small, informal groups most of the time. In inappropriate programs, teachers direct almost all of the activity. Children spend a large portion of their time passively sitting, listening, and waiting; and abstract learning materials such as workbooks, ditto sheets, and flash cards dominate a curriculum that emphasizes the large-group teacher-directed instruction and rote memorization and drill." (Day, 1988, p.10)

These distinctions between what is appropriate and what is inappropriate for young children are not made lightly. They are derived from an interpretation of a highly respected body of child development and early education literature which has delineated the unique characteristics of the early childhood period. However, each statement above, and the more detailed versions of each as stipulated in NAEYC's Guidelines for developmentally appropriate practice (Bradekemp, 1987) has stronger and more solid support from practical experience than it does from solid research findings. These statements do raise important developmental questions. Based on this position the questions for educators and researchers are NOT: "What can young children do?"

Most young children are willing and eager to do what is asked of them - even if it is potentially damaging to them in the long run.

Nor, "How do young children learn?"

We know a lot about the processes of learning and that young children learn readily - the undesirable as well as the desirable.

The question for those responsible for the education of young children is, "What should young children be doing that best serves their development in the long term?"

The answer to this question is not all that clear. If we assume that kindergarten children can and should learn some basic knowledge and skills that will orient them to their world and to school, but, most importantly, they should learn attitudes and feelings positive attitudes and feelings toward learning, toward school, toward teachers, toward their peers, and toward themselves, then the question is "How shall we insure such learning?"

In answering this question, the early childhood education community, which has generally been experiential in its approach, suggests that when academic coursework is pushed too soon, and through inappropriate methods, and when the emphasis is on narrowly defined academic competencies stressing the conformity of the child to the curriculum rather than vice versa, then large numbers of children are at risk of learning to dislike themselves. Conversely, planful, child-center, play-oriented, discovery approaches to curricula foster positive dispositions toward learning, communication competence, and a sense of self efficacy that has enduring positive effects throughout life (Elkind, 1987; Weikart, 1987; Katz, 1987, 1988). The early childhood special education community, which has been generally more empirical in its approach, has come down on the side of a more structured but equally individualized, developmental approach (Peters, Neisworth, & Yawkey, 1985). Current kindergarten curricula and current kindergarten practices do not necessarily reflect the wisdom of either side of this debate. A recent

national survey indicated that only 8.1 percent of principals indicated that their kindergarten focus is developmentally oriented as compared to normative skills and academic achievement oriented (ERS, 1986).

Clifford (1989) reports that in a recent survey of a stratified random sample of 103 kindergartens in North Carolina, 60% of all kindergartens fell below criteria for developmentally appropriate practice as indicated by a score below 5 on the Early Childhood Environmental Rating Scale.

Many kindergarten teachers complain that their principals and administrators, in part responding to the ill advised push of parents, and in part responding to pressures from higher grade teachers and testing programs, insist on a narrow, normative, and inappropriate academic curriculum (Blank, 1985; Morgan, 1985). Many other kindergarten teachers are ill trained and fail to recognize what is or is not appropriate (Mitchell & Modigliani, 1989). The results are, in all likelihood, detrimental to children.

The effort to make children conform to an inappropriate and arbitrary normative curriculum results in a) large numbers of disheartened children "failing" kindergarten; b) disgruntled parents; and c) very unhappy teachers.

A pressurized, normative curriculum also leads to: 1) efforts to extend the kindergarten day so there would be more time to include more academic material; 2) efforts to change the entry age for kindergarten so children will

be more "ready" for the academic material and pressures presented; and 3) an increased emphasis on testing both for entry into kindergarten and to determine if children have learned enough there to move on to first grade.

All three methods of trying to cope with these inappropriate demands are central to the issues of the transition from preschool to kindergarten and the early elementary years. They all assume that the child should be fitted to the curriculum instead of the curriculum fitted to the child. Each deserves at least a brief commentary.

Full- vs. Part-time Kindergarten

The key to understanding transitions from a life span or life course perspective is the notion of continuity vs. discontinuity (Peters & Kontos, 1987). If one defines kindergarten in narrow academic terms and sees the "longer" kindergarten day as the opportunity to gain more "time on task," then the notion ought to be rejected based upon the evidence. Aside from endorsing doing more and earlier what we already do not do very well, it stresses continuity with later schooling (where the child is going to) rather than continuity with the child's prior experience (where the child is coming from). As such, the result is a discontinuity with both modes of learning and with the context and climate of prior experience.

If, on the other hand, one accepts the espoused purpose of kindergarten to be to provide the foundation and motivation for successful life long learning, then there may be very legitimate reasons for endorsing full-day kindergarten alternative, at least for some children. Appropriate reasons for considering this alternative would be:

1) There are some data to support the full day alternative from a pedagogical perspective in that it has the potential for:
   a) allowing more time for the teacher to observe and assess children, to screen for potential learning problems, and to develop a more systematic approach to each child, hence promoting greater continuity with prior learning,
   b) adapting the teaching effort to a wider range of individual differences in learning style and rate, and
   c) extending the curriculum to include more information and a variety of relaxed, unhurried experiences (Murray 1987; Day & Drake, 1986).

2) To accommodate a greater variety of family needs including those of working parents and those of parents who wish to participate more actively in their children's education experiences by volunteering some portion of their time to the schools, creating greater consistency between the home and school environment.

3) To permit an increase in the comprehensiveness of the program through the cooperative enlargement of nutrition, health screening and other programs, permitting greater integration of the various aspects of development.

That is, for some children, a full-day kindergarten experience could provide the time and supports necessary for a successful transition to later schooling.

Unfortunately, the research on full- vs. half-day kindergarten has not been undertaken from this perspective. Future research must go beyond consideration of length of day as the key variable to a more sophisticated analysis of child/family characteristics, program purposes and characteristics, and complex long-term outcomes. In essence, a developmental perspective to research needs to be applied.

Kindergarten Entry Age

The second issue, at least from the public policy standpoint, involved in transition from preschool to kindergarten is the age of entry. The age one sets for entry into kindergarten is arbitrary. The age for school entry has varied considerably over time as has the age for compulsory schooling. What is important is what happens to the child when admitted. If the curriculum and methods are developmentally appropriate, then all children have the potential to succeed. If the curriculum is narrow and academic, a push down from first grade, then some children - usually the youngest - may be

insufficiently developed to accomplish the tasks required. Since the "pushed down" curriculum is invariably a normative one, at whatever age the children start, some portion are destined to "fail" with all the resulting damaging results (Schultz, 1989).

Age is not the real issue here, but rather the issue gets back to the purpose of kindergarten. Accepting the notion that kindergarten serves a transitional function raises the issue of transition from what to what. Within the child development literature the period of 5 to 7 years is one of major importance. Significant qualitative changes are occurring in how children think about and understand their world (intra-individual change). These changes have major implications for how children learn and how they may best be taught. During this developmental period (as with all others) we expect inter-individual differences in the rate of intra-individual change. Such individual differences are equally important for planning school programs.

It is important to note, however, these are not the only changes that are going on during this transition. Families are also undergoing changes and these changes are also qualitative and discontinuous (Maltesich & Hall, 1987). That is, entry into kindergarten for most families represents a new stage in the family life cycle; one which requires accommodation of new roles and the shifting of responsibilities (both from parent to

child and from parent to teacher). Within a single family we can consider these changes as intra-familial change and across families we would expect inter-familial differences in intra-familial change.

The point is that both intra-individual and intra-familial variability will determine the success of the transition that occurs. "Readiness" is both a child and a family variable and it is certainly not markered by a single index - the child's chronological age.

Testing in Early Childhood

A recent survey of 30 states reported that academic readiness testing prior to kindergarten is used in some communities (seven states mandate this practice), 43 states reported that some districts use academic readiness tests prior to first grade (Gnezda & Bolig, 1989; Schultz & Lombardi, 1989).

Yet, testing within early childhood settings, when used for "high stakes purposes," has severe limitations and can be damaging at both the individual child and the program levels (Meisels, 1987). Over the years there has been much discussion of the appropriateness of testing young children using standardized tests (Meisels, 1987). There is, within the education and research community, general agreement concerning the limitations of testing young children (Schultz, 1989). In general, the psychometric characteristics of cognitive measures (reliability and predictive validity) increase with the age of the child. Measures obtained on children below the age of three have

little predictive value for latter schooling, and only measures obtained by trained personnel, administered on a one-to-one basis offer any significant diagnostic value. When one moves into other than the cognitive domain, reliable and valid measures of early childhood development are virtually non-existent. The potential dangers of using such measures to "label" children have been widely recognized (Meisels, 1989).

At the program level, the dangers can be equally great. Because measurement possibilities are limited, usually restricted to a narrow range of academic skills and cognitive abilities, assessments may fail to encompass the range of developmentally appropriate, comprehensive outcomes that are the goals of the program. Further, since many of the desired effects of the program involve process rather than outcome variables, they need to be assessed over time rather than at a single point in time. Hence, single point, skill tests, are as inappropriate for assessing the accomplishments of a particular teacher or program as they are inappropriate for assessing the development of a particular child.

Yet, when used, they are a powerful, and often destructive force, in shaping both the behavior of teachers and the design of curricula (Elkind, 1989). Curricula are designed to accomplish what is measurable (as compared to what is appropriate) and teachers are pressured into teaching toward producing results on those measures. The result is an increasingly narrow perspective on the goals of kindergarten, or more generally, early childhood

education. The behaviorist foundation of this belief in "objective measurement," and its universal support by the multimillion dollar curriculum materials business, has been well articulated by David Elkind (1988). At the heart of this behaviorist tradition is the notion that the curriculum (the test) is what is important, rather than the learner. Test driven curricula are then, almost by definition, developmentally inappropriate. Recent longitudinal study results suggest they may have long term detrimental effects on children as well (Weikart, 1987).

Within early childhood education, and as a central component of early childhood personnel preparation, is the notion that routine, systematic observations of the child yields the best assessment of the child's abilities. Early childhood teachers are taught to observe children and to use those observations to adapt their teaching to meet the needs of each child. Teachers have the opportunity to see children in action in a variety of situations. They are often keenly aware of the child's emotions, physical prowess or limitations, and their competence in social situations with other children and with adults. The best teachers confer regularly with parents and compare their observations with those of parents who have the ooportunity to view the child in other circumstances. Data gained from such observation yield have the potential to be the most valid assessments of both child progress and program performance.

The conflict between the inaccuracy and inappropriateness of early childhood assessment procedures on one hand and the need for public accountability for the expenditure of public funds on the other, makes the need for research and development work in this area most pressing. Clearly, the need is to develop means for capturing, organizing, and integrating the observations of talented classroom teachers and of parents.

Implications

In this section of the paper, kindergarten (and perhaps K - 3rd grade) has been viewed as a developmental transition in the education process rather than as a discreet curriculum entity. This perspective recognizes the life-span developmental changes going on within the child during the 5- to 7-year age span and the life-cycle changes in functions, roles, and responsibilities undergone by parents during the transition to academic schooling.

The policy implications of this perspective are threefold:

1) Kindergarten should be viewed as a process involving the child, the parents, and school personnel rather than as a curriculum content. The process needs to be organized to facilitate both the child's learning and adjustment to more formalized academic schooling and the transition of responsibility from parent to school.

2) The appropriate timing for initiating this process is a complex function of the child's cognitive, physical, social, and emotional

readiness and the parents readiness for role transition. Assessing this readiness is equally complex and will vary considerably from child/family to child/family system.

3) The evaluation of the success of kindergarten should not be based on child achievement in first grade. Rather it should be based upon the attainment of a set of child-parent-school relationships that can develop and sustain future learning and development.

Clearly, this perspective opens up several new or previously underplayed research domains. For example, do some kinds of kindergarten arrangements facilitate parental role transitions more effectively than others? What procedures may be initiated to best determine the appropriate timing for individual children and families? How may we best serve the needs of accountability within a process framework? Or, even more basically, how can we move current kindergartens to a level of developmental and transitional appropriateness? This last question leads logically to the next section of this paper.

Personnel Preparation for Early Childhood

The rapid growth of early childhood programs and our increasing understanding of what desirable programs might look like leads to the illusion that the future looks bright. However, advancement of quantity and enhancement of quality of programs both depend upon the supply of qualified personnel - a condition for which there are major impediments (Granger, 1989).

Structural Impediments

It is generally agreed that teacher/caregiver training specifically related to child development and early education is essential. Indeed, I have argued elsewhere that the behavioral requirements for working in early childhood settings demand it. Functioning effectively in settings that have organizational autonomy, that serve a highly diverse clientele, that are socially complex, and that place the individual in a position of relative isolation from other colleagues requires continuous professional judgement based on an accurate understanding of children's needs and the best practices for meeting those needs. Yet, in the United States, we retain a chaotic "non-system" of preservice and inservice employment education requirements. Within this "non-system" those who work most autonomously and have the most extensive responsibilities (health, welfare, and education) for the greatest number of hours daily and yearly, with the youngest and most vulnerable children must meet the fewest and least stringent requirements.

Further, where education or training standards are set by certification, credentialing, or regulatory authority they usually a) are arbitrary (X number of hours or credit hours of training without any assurance of the content or level of understanding of the trainee), b) are retrospective (a reflection of training or education received sometime in the past without concern for what the person knows or can do now), c) bear little relation to the specific employment level, clientele or setting, d) permit little room for individual differences, and e) with some notable exceptions, show little relation to actual successful performance (Peters, Cohen & McNichol, 1974).

Our efforts to address the issue is complicated by three further concerns: First, the demands of the field for new workers and professionals far exceeds our capability to train and educate such persons - particularly as new kinds of specialists are needed (as for example in response to P.L. 99-457).

Second, there is the incredible turnover rate among the lowest pay and education level workers (estimated to range between 36% and 62% annually for day care centers and family day care homes respectively - though some would consider even these to be low estimates). Such turnover rates place into question the viability of many preservice training options and create an enormous demand for the continuous availability of some type of training.

Third, the training and education routes that we know work best, that create horizontal and vertical career mobility, and are most likely to lead to higher salaries, fringe benefits and employment stability are the very ones that most often exclude what has been called the "educationally disenfranchised" - poor and minorities (Peters, 1988). Indeed, it is a curious thing that at the very time we have an increasing demand for qualified early childhood teachers and administrators, and when the numbers of minority students entering educational fields is decreasing, our major educational institutions are considering or putting into place requirements that will require five years of formal education with all the direct and indirect

expenses involved. Doing so perpetuates a two class system of early childhood education in this country and an underclass of low level child care workers who seem destined to remain below the poverty line.

Content Impediments

The central theme of the essential nature of child development knowledge to early childhood teachers runs through the many reports and publications designed to guide early childhood personnel preparation programs (c.f., NAEYC, 1982, 1985; Peters & Kelly, 1982). Such knowledge has been considered essential in the movement toward professionalism of the early childhood field (Almy, 1975; 1988) and the possession of such knowledge is considered essential to those providing high quality programming for young children. For example, the Accreditation Criteria and Procedures of the National Academy of Early Childhood Programs requires that "the program is staffed by adults who understand child development and who recognize and provide for childrens' needs" (Bredekamp, 1984, p. 18).

Such agreement concerning the importance of child development knowledge to the early childhood teaching field does not, however, mean that there is fundamental agreement on what constitutes the essentials of such knowledge as it is to be incorporated into the course sequences of teacher preparation programs. A recent telephone survey (Bailey, Simenson, Huntington, Cockrane, Crais & Humphrey, 1988) confirms that there is major variability in the amount of child development course work required across the several disciplines

associated with programming for young children, and across preparation levels, for example, the associate, bachelors, or masters level. Virtually no information is available concerning the content of courses that are required or what students learn (Peters, Cohen & McNichol, 1974).

The content issue is further complicated by changes in the ecology of early childhood. For example:

1. Early childhood programs are involving younger children. Infant and toddler development is a field in and of itself with its own rapidly growing research and theory base. It is no longer reasonable to assume that early childhood personnel need only to understand the development of three- to eight-year-olds.

2. Early childhood programs are serving an increasingly diverse clientele. Federal law (e.g., P.L. 94-142, and P.L. 99-457, and state initiatives, are bringing more handicapped, developmentally delayed, and at-risk children into the mainstream of early childhood education. Understanding diverse patterns of development is as essential as understanding normative patterns of development.

3. Quality early childhood programs recognize the need for ever closer work with parents. Knowing child development is not enough, understanding family functioning and development, parent/child relations and communication techniques for working with parents is increasingly essential.

4. Changing demographic and immigration patterns have continued to introduce a wider array of languages and cultures into our communities. As such, an understanding of child development, either normative or non-normative, requires an understanding of the context in which that development occurs - the family and the community - from a multicultural, multilinguistic perspective (Bowman, 1989).

5. Early childhood programs are providing, directly or indirectly, a wider range of services to children and families. These range from health and nutrition programs to the provision of speech and physical therapy. Interagency coordination and collaboration will be the "buzz words" of the 1990's. Personnel working with children will need enough shared knowledge and terminology to communicate and negotiate with each other and with a wide range of related professionals in both the public and private sector.

With each increase in knowledge and skill that seems appropriate, obvious complications for the time, cost, and means for preparing personnel are introduced. Also, introduced are major issues concerning setting and maintaining professional students (Bredekamp, In press).

A Systems Approach

Clearly, not all personnel working in early childhood need the same range of knowledge or qualifications. Research and experience suggest that if we are to develop a truly professional field and actually protect and enhance

children's short-term and long-term well-being, we need to institute a systematic plan of personnel development that includes five tiers of activity. The five tiers are:

1. Inservice Training and Orientation,
2. During Service Training and Education,
3. Professional Education and Credentialing,
4. Specialist Preparation,
5. Senior Leadership Preparation.

Each of these tiers of activity relates to the stages of professional development that Karen VanderVen (1988) has suggested and in part to traditionally thought of academic program levels.

Inservice Training and Orientation

The current demand for child care personnel, coupled with the low pay and benefits they usually receive, indicates that there will be a continuing influx of totally untrained and inexperienced personnel. These entry level personnel (and this applies equally to undergraduate students in their first practicum experience) are usually conceptually unsophisticated, tend to be driven by warm feelings toward children, tend to gravitate toward particularly needy children and have difficulty setting limits or denying children's requests. (Discipline is their major request when they are asked what kind of

inservice training they need.) Such personnel, in their initial practice, also tend to be passive and dependent; seeing all the frustrations of their work as caused by external forces about which they can do nothing (VanderVen, 1988).

Such persons need an orientation to the field, with a rather narrow focus on their situation and clientele. They need specific training geared to their daily activities, and close supervision as they try new techniques and their roles. They also need the encouragement and sense of being part of a larger scheme of things that comes from being "connected." There are numerous examples in the literature of successful programs of this type at the local level. Two of the side benefits of such programs are that they tend to reduce staff turn-over rates and encourage people to move on to other levels of training.

During Service Training and Education

Persons in this stage of their professional development are beginning to become concerned with quality teaching. They desire to operate their early childhood environment in a planful and rational way to accomplish specific goals for the children in their charge. As such they recognize a need for understanding child development research and theory and the diversity of usable appropriate practices that may be applied to their situation. They clearly identify themselves as part of the early childhood education community and seek to know its history and traditions. They seek ways to increase

their effectiveness and to share their ideas. They wish to be self-reliant. This sense may come as a result of progress through a two or four year educational program, or it may come through extensive work experience. In either case, the important aspects of the training and education to be provided is the blending of theory with practice in a systematic way.

For undergraduates engaged in a four year program this is accomplished through upper-level methods courses and through the typical student teaching experience. For those in the field, it may be successfully accomplished through programs such as CDA (Child Development Associate) training programs (c.f., Peters & Sutton, 1985; Peters & Deiner, 1987; Peters, 1988).

Such training and education leads to informed, but not necessarily fully professional, practice. Nor, does it necessarily lead to professional recognition (Peters, 1988).

Professional Education and Credentialing

It is generally agreed that a professional needs to be a well educated person. The term professional is related to an idea that was originally embedded in the concept of the "learned professions." Professions such as law, medicine or the clergy require a high degree of education in the liberal arts and in the sciences. They are directed toward the development of mental capabilities, a range of understandings, and ways of thinking that have carry-over to all walks of life. True professionals have both educational

attainments (degrees) and licenses or certifications that establish their privilege to practice based upon their competencies. Together these are the credentials of professional standing. It has been argued that the lack of either or both sets of credentials classifies the practitioner as either a craftsperson or a semi-professional (Spodeck, Saracho & Peters, 1988). The traditional four or the newer five year degree programs leading to early childhood teacher certification purport to accomplish professional standing by providing both a strong arts and science educational grounding and advance competencies in professional practice.

Specialist Preparation

VanderVen's third stage of professional development is often associated with longevity in the field. For many practitioners, after several years or longer in the field, there needs to be a career choice with some elaborating their direct practice with young children, usually along more clinical lines, and others moving their careers toward more indirect services (e.g., administration, supervision, curriculum development). In either case, they are ready to assume leadership roles and to serve as professional models for others. As they seek their new roles they recognize a need for new and different skills in areas such as supervision, program planning, administration, financial management and fund raising, or in particular, assessment procedures or techniques for working with special children or families. They also seek to enhance their credentials through both advanced degrees and specialty certifications. As the needs of the field grow the need for such persons also grows.

Senior Leadership Preparation

I have suggested elsewhere (Peters, 1981) that the viability of a profession is dependent on the production of a leadership cadre that can take on the responsibility for a) generating new knowledge, b) organizing and disseminating that knowledge through academic programs, c) setting, assessing, and maintaining standards of professional performance, and d) organizing to unify and advocate for the profession. These are the people that incorporate the best thinking in the field, they are the sponsors of creative ideas, and the store house for the field's wisdom. They are the critics and organizers of, amongst other things, the whole five tier personnel development system.

Again, specialized preparation is recognized and needed, (e.g., in research methods, evaluation, policy formation, and the like). So too are appropriate credentials; usually in the form of the doctoral degree.

The development of such a system is feasible (Peters, 1988). How best to accomplish and fund such a system will open up a number of research and evaluation questions. For example, what are the critical content and skill domains for each level of training? What numbers of personnel are needed at each level to provide for the needs of the early childhood programs of the next decade?

Research Implications

This brief review has focused upon only a few issues in early childhood education. Certainly many more were worthy of inclusion. However, the intent was to highlight a few main themes for future research. These themes were:

1) The effectiveness of early childhood programs is the result of a complex set of interactive processes that involve child and family entry characteristics and characteristics of the intervention program. Future research needs to carefully delineate these characteristics and their interaction over time in such a way as to unconfound variables so those that are critical to success may be determined. Both child and parent change need to be considered. As the process is analyzed, cost data, and cost effectiveness data, should be included. The only cost-effectiveness data available for early education are those from The Perry Preschool Program, and they set a standard that is difficult to meet in most programs (Granger, 1989). However, until more refined research is conducted it is unclear whether all aspects of the program are equally valuable or essential.

2) More detailed study of the transition to formal academic schooling is needed. Such research, again, requires a careful analysis of child and family characteristics as well as the nature of the program supports provided to facilitate the transition. Again, the outcome variables should include both child and family variables and be collected longitudinally to determine effects beyond those of immediate academic achievement scores.

3) Levels and content of teacher preparation should be included as one of the critical variables in delineating program characteristics. Greater specificity in this area would permit determining which teacher preparation variables are a) related to quality developmental programming, and b) to important child and parent outcomes. Such an analysis would, in turn, provide essential information for the revision of early childhood teacher education programs.

4) Measurement of both process and outcome variables has fallen well behind the questions that need to be addressed in early education. Major work needs to be undertaken to define the critical variables of the educational process and to provide reliable and valid measures of these. Systematized approaches to observation seem most promising.

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Table 1

Summary of Regression Findings by Head Start Delivery Mode

Center-Based

Child In-Class Hours:
- Negatively predicted children's Math scores
- Negatively predicted mother's Encouragement for Learning
- Negatively predicted Maternal Language scores
- Negatively predicted Maternal Knowledge of Child Development

Home Visit Hours:
- Positively predicted children's Language and Math scores
- Negatively predicted Maternal Expectations

Parent Volunteer Hours:
- Positively predicted children's Science scores

Child PPVT-MA:
- Positively predicted Maternal Language
- Positively predicted Maternal Expectations

Home-Based

Child In-Class Hours:
- Positively predicted Toys,Games & Reading Materials*
- Positively Predicted Maternal Language*

Home Visit Hours:
- Positively predicted HOME-Physical Environment

Parent Volunteer Hours:
- Positively predicted Maternal Encouragement

Parent Teaching Hours:
- Positively predicted children's Science scores

Maternal Encouragement:
- Positively related to Children's Math, Science and PPVT-MA posttest scores

Maternal Encouragement:
- Positively related to children's Science and PPVT-MA posttests

Parental Childrearing:
- Negatively related to children's Math, Science and PPVT outcomes

Child PPVT (Post):
- Positively related to Maternal Expectations and Maternal Encouragement

Child Language (Post)
- Positively related to HOME-Physical Environment and to Maternal Child Rearing Style

Home/School

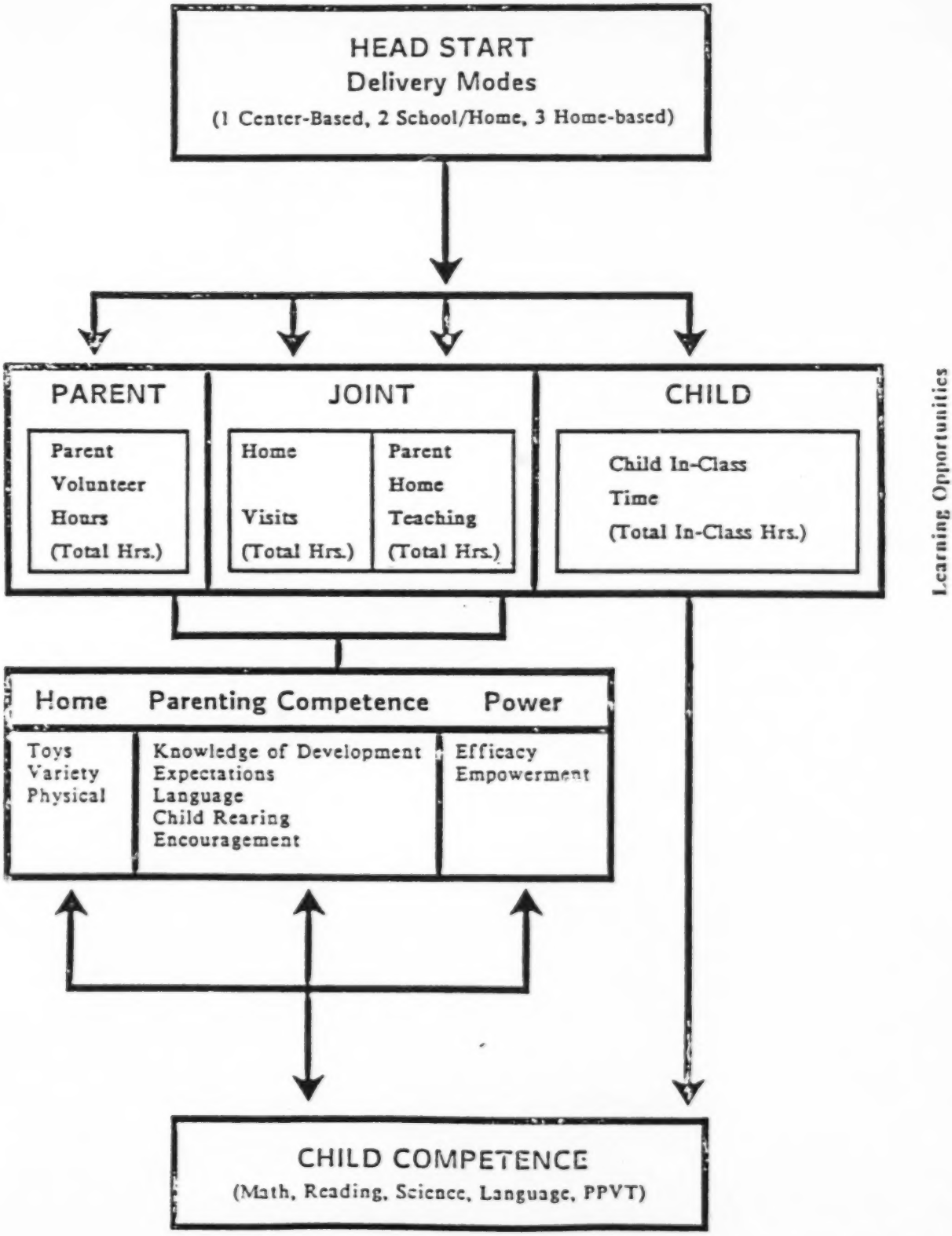
Child In-Class Hours:
- Positively predicted children's Language and Math scores
- Positively predicted Maternal Expectations
- Negatively predicted Maternal Knowledge of Child Development
- Negatively predicted Maternal Child Rearing Style (Warmth)

Home Visit Hours:
- Positively predicted children's Language scores

Maternal Encouragement:
- Positively related to children's Science
- Positively related to children's PPVT-MA

Maternal Knowledge:
- Positively related to children's Language scores

FIGURE 1


HEAD START
Delivery Modes
(1 Center-Based, 2 School/Home, 3 Home-based)
PARENT
Parent Volunteer Hours (Total Hrs.)
JOINT
Home Visits (Total Hrs.)
Parent Home Teaching (Total Hrs.)
CHILD
Child In-Class Time (Total In-Class Hrs.)
Learning Opportunities
Home
Parenting Competence
Power
Toys
Variety
Physical
Knowledge of Development
Expectations
Language
Child Rearing
Encouragement
Efficacy
Empowerment
CHILD COMPETENCE
(Math, Reading, Science, Language, PPVT)

Center-Based Programs

FIGURE 2

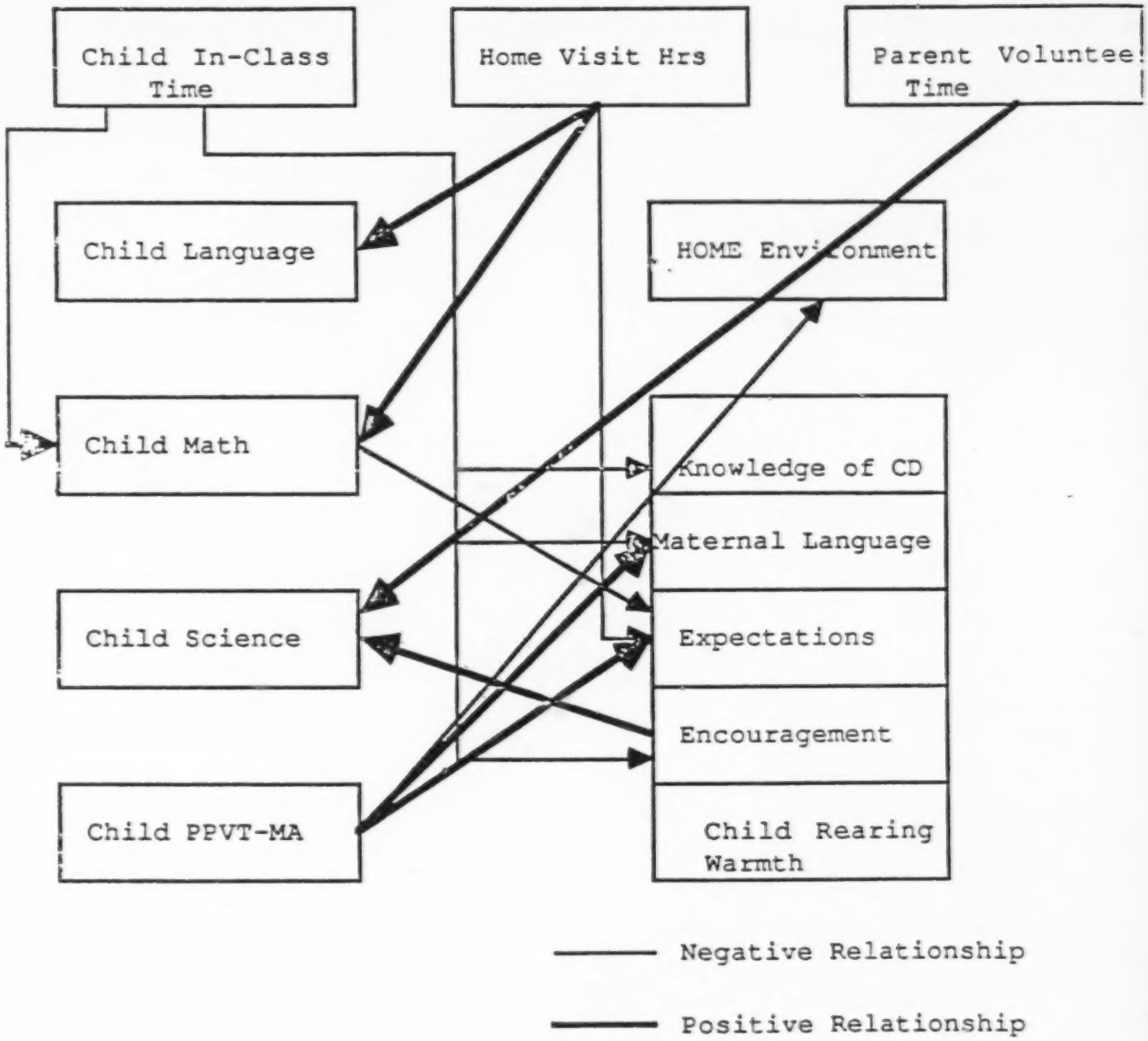
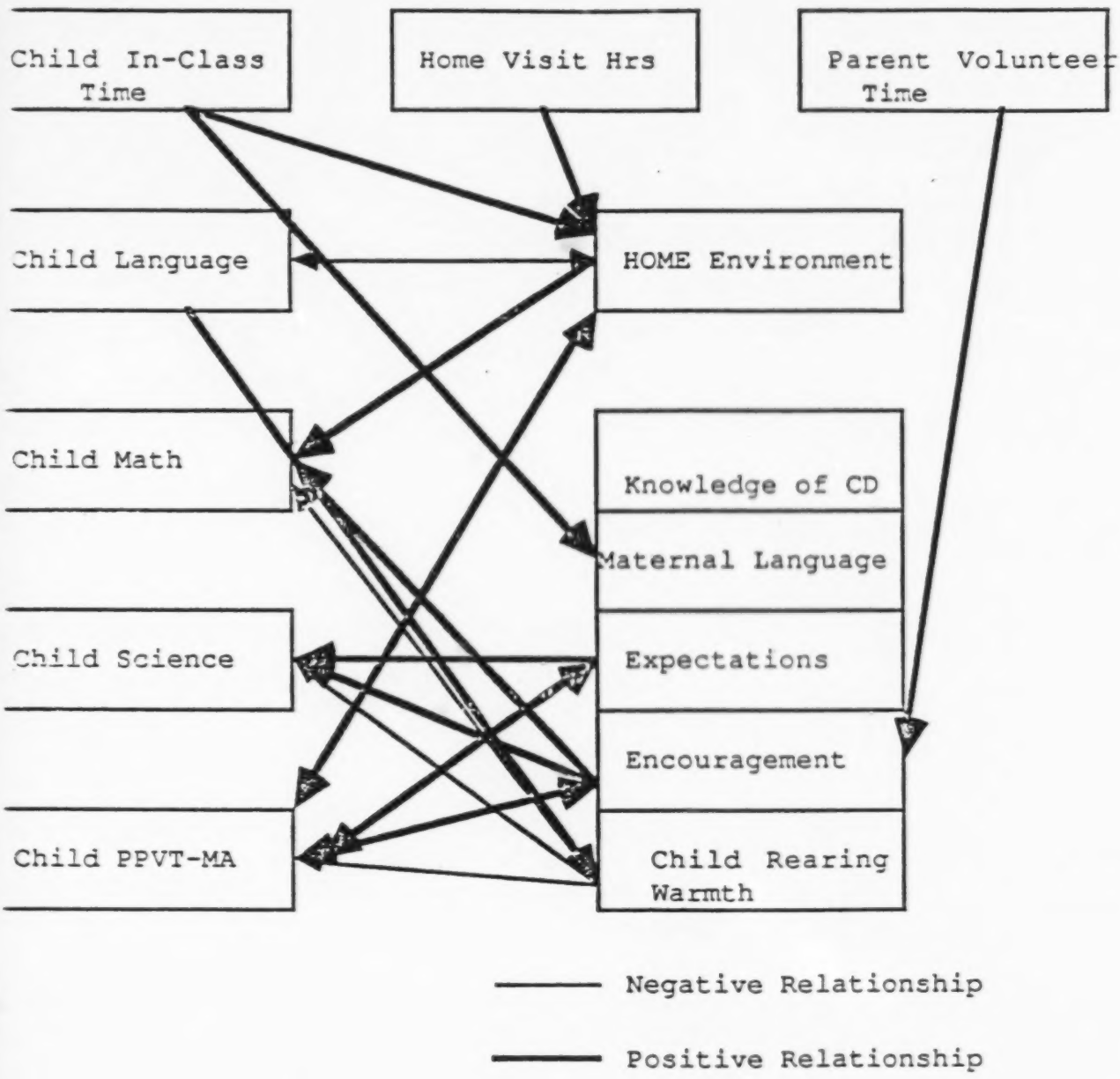


FIGURE 3


Child In-Class Time
Home Visit Hrs
Parent Volunteer Time
Child Language
HOME Environment
Child Math
Knowledge of CD
Maternal Language
Child Science
Expectations
Encouragement
Child PPVT-MA
Child Rearing Warmth
Negative Relationship
Positive Relationship

Home/ School Programs

FIGURE 4